IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

Applicant:	George R. Borden IV	Group Art Unit:	2621
Serial No.:	10/821,294	Examiner:	Czekaj, David J.
Filed:	April 9, 2004	Customer No.:	55648
Title:	METHOD OF SELECTING AND GENERATING FEEDBACK IN OBJECT TRACKING SYSTEMS		

APPELLANT'S REPLY BRIEF

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August 21, 2009

Mail Stop APPEAL BRIEF-PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

BACKGROUND

This brief is in furtherance of the Notice of Appeal filed in this case on January 29, 2009 and the Appeal Brief filed in this case on January 31, 2009, and in response to the Examiner's Answer mailed on June 23, 2009.

STATUS OF CLAIMS

A. TOTAL NUMBER OF CLAIMS IN THE APPLICATION

There are 3 claims currently pending in the application.

B. STATUS OF ALL CLAIMS

Claims canceled:	1-26, 30-32
Claims withdrawn:	None
Claims pending:	27-29
Claims allowed:	None
Claims objected to:	None
Claims rejected:	27-29

C. CLAIMS ON APPEAL

Claims 27-29 are on appeal.

A copy of the claims on appeal is set forth in the Claims Appendix to this Brief.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The ground of rejection presented for review is whether claims 27-29 are: (1) whether claims 27-29 are unpatentable under 35 U.S.C. § 101 as being directed to non-statutory subject matter; and (2) whether claims 27-29 are unpatentable under 35 U.S.C. §103(a) over Abe, U.S. Pat. No 5,473,369 in view of Yu., U.S. Pat. No. 5,434,621.

ARGUMENT

I. Rejection under 35 U.S.C. § 101

Independent claim 1 recites the limitations of "*monitoring a level* of confidence that said tracking system is tracking a target" and "*increasing magnification of an image* visible to said operator in response to a *decrease in said level* of confidence." (emphasis added) Taken together, these limitations render claim 1 statutory.

The touchstone, or "true issue" as stated by the Federal Circuit regarding the inquiry into whether a claim is statutory is whether an applicant "seeks to claim a fundamental principle (such as an abstract idea) or a mental process." *In re Bilski*, slip opinion at p. 26. The Federal Circuit indicated that this issue is resolved with respect to method claims by applying a "machine or transformation test" where a claim is statutory so long as it is either directed to a particular apparatus *or* claims a transformation of some article or substance. *See* Id. at p. 24 .

At the outset, the claim limitation of "increasing magnification of an image" is neither an abstract idea, or a mental process. An image must be formed or displayed by some particular object, and the step of magnifying an image requires some transformation or manipulation of either a particular apparatus (the lens of a camera or a dial on a pair of binoculars as posited by the Examiner) or the underlying data comprising the image, if digitally represented. In either circumstance, the claim is statutory. If the image is projected by a lens, camera, or other device, not only is magnification accomplished by manipulating that device, but on a broader level that image is the projection of light upon a tangible object of a person's retina, or a movie screen, etc., and magnification of that image transforms the light passing through the lens and impinging upon the imaged surface. If the image is merely digital data, then magnification satisfies the test expressly articulated by the Federal Circuit. *See In re Bilski* at p. 26 ("Thus, the

transformation of that raw data into a particular visual depiction of a physical object on a display was sufficient.")

The Examiner argues that claim 1 is not statutory on the basis that it would read on a person tracking an object with a pair of binoculars and increasing magnification of the image by turning a dial, as confidence diminishes that the object is being followed.[1] Given that this hypothetical requires manipulation of an actual device, the applicant believes that the Examiner has proven the applicant's point, which is that the claimed step of "magnifying [a visible] image" is statutory *per se* because a visible image at a minimum *represents* tangible objects (indicated by the *Bilski* court as sufficient) and in the broadest sense *must be formed on* a tangible object itself, as noted in the preceding paragraph. It then follows that magnification of a visible image is sufficiently tied to a statutory category because it transforms or changes the state of physical substances, whether those substances are lenses, light, LCD crystals, phosphors, etc.[2]

For these reasons, the applicant respectfully argues that the Examiner's rejection of claims 1-3 under 35 U.S.C. § 101 was improper, and should be reversed.

II. Rejection of claims 27-29 under 35 U.S.C. § 103(a)

The Examiner rejected claims 27-29 under 35 U.S.C. § 103(a) as being obvious in view of the combination of Abe and Yu. Independent claim 27, from which the remaining claims each respectively depend, recites the limitations of "monitoring a level of confidence that said tracking system is tracking a target" and "increasing magnification of an image visible to said

[1] The applicant parenthetically disagrees that claim 1 would read on this scenario as a person does not "monitor" their own confidence level in something. A person's confidence in something may increase or decrease as an abstract proposition, but the assertion that a person "monitors a "level" of that confidence makes little sense.

[2] If manipulating data of a displayed digital image is statutory, as indicated by the *Bilski* Court, then it would be senseless to hold that the old school method of manipulating an image displayed through a lens on a projection surface is not.

operator in response to a decrease in said level of confidence." The Examiner alleges that Abe discloses the step of "monitoring a level of confidence" that an object is being tracked, pointing to a disclosure in that reference that an algorithm can be used to determine whether a tracked object is moving outside the boundaries of an image, so as to adjust the camera to continue tracking the object. *See* Abe at col. 10 lines 46-64 ("When the coordinates of the object satisfy the following formula . . . disappearance of the object from the screen is judged *to be occurring*.")(emphasis added). The use of the italicized tense indicates that Abe is not monitoring a confidence that an object is being tracked, but instead the relative location of a tracked object in an image, so that prospective actions can be taken to maintain tracking that object. More importantly, given this reading of Abe, if it is apparent that a tracked object is moving off the screen as detected in this step, then magnifying the image will cause the object to be lost, i.e Abe teaches against the applicant's subsequently claimed step. The Examiner cites Yu for its disclosure that an object, for aesthetic reasons, should be maintained as a constant size in an image, hence zooms in as an object moves away from a lens. This disclosure of Yu, however, is completely irrelevant, and in fact contrary to, the teachings of Abe that a tracked object may be moving laterally outside the width of the image. In the latter instance, one could maintain track of the object either by rotating the camera or zooming out – not in.

Second, the Examiner's allegation that Yu teaches that magnification should be increased in response to a decrease in confidence that an object is being tracked is flawed for two reasons. First, that reference never loses confidence that an object is being tracked. Yu monitors the number of autofocus points that are locked on an object, on the assumption that this number is inversely proportional to the distance to the object. This makes sense, as the autofocus points of a camera are spatially arranged over the image plane and the closer an object is, the more space the

object occupies in the frame, and the higher the number of autofocus points that will lock. Counting the number of autofocus points locked on an object is not a "level of confidence" that the object is being tracked, it is *only a proxy for how large a tracked object is in the image screen.* Because Yu always maintains a relatively constant size, the tracked object never becomes small enough that there is doubt about whether the camera is tracking the object.

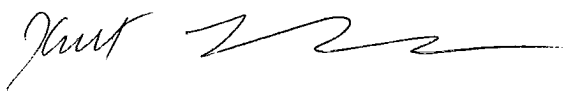
Moreover, the Examiner is applying a bait and switch tactic. Supposedly, Abe's confidence that an object is being tracked measures the likelihood that an object is moving laterally outside the image window of the camera. Yu's confidence level is supposedly likelihood that an object has moved so far away as to be indistinguishable from the background. This inconsistency deprives the rejection of a rational basis, if for no other reason than that using a teaching of Yu to zoom in, in a situation where Abe detects that an object is moving laterally outside the window of an image, would guarantee that the tracking system would lose the object.

For the forgoing reasons, the applicant respectfully requests that rejection of claims 27-29 under 35 U.S.C. § 103(a) be reversed.

CONCLUSION

The Examiner's respective rejections of claims 27-29 should be reversed, and the claims should be found patentable.

Respectfully submitted,



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